Contents

Aertsen, A. M. H. J., Olders, J. H. J., Johannesma, P. I. M.: Spectro-Temporal Receptive Fields of Auditory Neurons in the Grassfrog. III. Analysis of the Stimulus-Event Relation for Natural Stimuli 195

Barbi, M., Ferdeghini, E. M.: Relevance of the Single Ommatidium Performance in Determining the Oscillatory Response of the *Limulus* Retina 45

Borello, L., Ferraro, M., Penengo, P., Rossotti, M. L.: A Model of Visual Perception 79

Caelli, T. M.: Facilitative and Inhibitory Factors in Visual Texture Discrimination 21

Caelli, T. M.: Some Psychophysical Determinants of Discrete Moiré Patterns 97

Caelli, T. M., Dodwell, P. C.: On the Contours of Apparent Motion: A New Perspective on Visual Space-Time 27

Ebenhöh, H., Hemminger, H.: Scaling of Color Sensation by Magnitude Estimation: A Contribution to Opponent-Colors Theory 227

Hatze, H.: Analysis of Stretch Responses of a Myocybernetic Model Muscle Fibre 165

Hollerbach, J. M.: An Oscillation Theory of Handwriting 139

Horn, E., Mittag, J.: Body Movements and Retinal Pattern Displacements while Approaching a Stationary Object in the Walking Fly, *Calliphora erythrocephala* 67

Jensen, H. J.: System-Theoretical Analysis of the Clare Bishop Area in the Cat 53

Jürgens, R., Becker, W., Kornhuber, H. H.: Natural and Drug-Induced Variations of Velocity and Duration of Human Saccadic Eye Movements: Evidence for a Control of the Neural Pulse Generator by Local Feedback 87

Kawahara, T.: Coupled Van der Pol Oscillators — A Model of Excitatory and Inhibitory Neural Interactions 37

Kemmerling, S., Varjú, D.: Regulation of the Body-Substrat-Distance in the Stick Insect: Responses to Sinusoidal Stimulation 129

Koch, A. S., Nienhaus, R., Lautsch, M., Lukovits, I.: An Advanced Version of the Dynamic Receptor Pattern Generation Model: The Flux Model 105

Kostyukov, A. I., Ivanov, Yu. N., Kryzhanovsky, M. V.: Probability of Neuronal Spike Initiation as a Curve-Crossing Problem for Gaussian Stochastic Processes 157

Marcelja, S.: Electrical Coupling of Photoreceptors in Retinal Network Models 15

Marko, H.: The z-Model — A Proposal for Spatial and Temporal Modeling of Visual Threshold Perception 111

Palm, G.: On the Storage Capacity of an Associative Memory with Randomly Distributed Storage Elements 125

Palm, G.: Towards a Theory of Cell Assemblies 181

Pinsker, H. M., Bell, J.: Phase Plane Description of Endogenous Neuronal Oscillators in *Aplysia* 211

Rodenburg, M., Stassen, H. P., Maas, A. J. J.: The Threshold of Perception of Angular Acceleration as a Function of Duration 223

Stein, R. B., Oguztöreli, M. N.: The Role of γ-Motoneurons in Mammalian Reflex Systems 171

Trincher, K.: Der Informationsgehalt des Intrazellularwassers und die Informations-Speicherung in der Embryo- und Phylogenese 1

Van Ouwerkerk, H. J., Tulp, J. H., Piceni, H. A. L., Roufs, J. A. J., Blommaert, F. J. J.: Instabilities in a Continous Medium Model for the Retina 11